

African-American Undergraduate College Students' Perceptions of Online Education Experiences

Bhagaban Panigrahi, Jim Chen, Anh Ngo

School of Business
Norfolk State University
Virginia, USA

Abstract

Online education has become a critical part of higher educational institutions today. The objective of this study was to explore African-American undergraduate students' perceptions toward online education at a historically black university located in the Southeastern United States. A convenience sample of 175 African-American students participated in this study. Our findings indicated that overall, these African-American undergraduate college students had positive perceptions toward online education. Upperclassmen had more positive perceptions of online education compared to underclassmen, and respondents with prior experience with online education had more positive perceptions compared to those with no prior experience. Though their general perceptions did not differ, business majors and non-business majors had significantly different perceptions regarding the ease of communication and collaboration when using an online platform. The results of this study should be of interest to stakeholders including administrators, instructors and students who plan to adopt, teach and participate in online courses at HBCUs in the future.

Keywords: Online Education, HBCU

1. Introduction

Online education is one of the many innovations that technology has made available to the world. Learners no longer have to be physically present in a brick and mortar classroom to learn; the reach of the courses extends far beyond the confines of physical campus. As a paradigm of instruction, online learning is distinct from its educational predecessors and is characterized by the direct influence of an educational organization (which distinguishes it from self-study), in which there is a physical separation of students from teachers (which distinguishes it from face-to-face education) and instead relies on the use of virtual networks as the primary medium for multi-directional-communication between students, classmates and instructors through which to present and distribute educational content, to facilitate interactive class discussions, and communicate with fellow classmates.

Today, online learning is quickly becoming a mainstream at academic institutions of higher learning. The number of students enrolling in college level online courses has outpaced all other forms of distance learning, and Web-based online instruction has become the preferred mode of education for most college students (Lease & Brown, 2009). Public institutions command the largest portion of distance education students, with an average of 72.7% of all undergraduate and 38.7% of all graduate-level students enrolled in some form of distance learning. This demand for online education continues to grow rapidly with no signs of slowing. In fall of 2002, 1.6 million students took at least one online course; one decade later, in the fall of 2012, this number had increased to 6.7 million (Allen & Seaman, 2013). According to the 2015 Survey of Online Learning Report conducted by the Babson Survey Research Group and the Online Learning Consortium (OLC) reported that one in four college students (28%) were enrolled in at least one distance education course (a total of 5,828,826 students, year-to-year increase of 217,275, (4%)). Among the cohort of students enrolled in distant education courses across the US in the fall of 2014, 51.2% (2.97 million students) took some combination of distance learning and face-to-face courses, and 49.1% (2.85 million students) exclusively sought instruction through distance education courses.

2. Literature Review

2.1. Institutional Perceptive of Online Learning

Online learning has become such an integral part of higher education that 65% of institutions of higher education include online learning as a critical part of their long-term strategy. Early investments to developing curricula conducive to instruction via online platforms may impact an institution long term by helping to build enrollment growth and achieve financial stability. As such, the number of institutions in the U. S. offering university-level pure online as well as hybrid/blended online courses has reached as many as 2,700 (Kim, Kwon, & Cho, 2011).

Although the number students enrolled at least one fully online class in the United States has grown significantly over past two decades (Allen and Seaman 2015), the National Center for Education Statistics reports that African American college student enrollment is significantly less in online courses when compared to white students. Many Historically Black Colleges and Universities (HBCUs), especially public HBCUs, are behind the curve in terms their full-fledged adoption of online education. As early as 2008, Boyette highlighted the underrepresentation of the voices of African-American students on online learning, and emphasized the need for culturally diverse groups to be included in emerging research. However, little progress has been made since then to examine African-American students' experiences and outcomes in online education (Rovai and Ponton, 2005).

2.2. Faculty Perceptive of Online Learning

Perceptions regarding the “value and effectiveness” of online courses varies significantly even in academic circles. On average, only 29% of faculty report acceptance of the teaching approach, with a large range of 11-60% variability depending on whether the institution has or doesn't offer distance learning. The proportion of chief academic leaders that say online learning is critical to their long-term strategy fell from 70.8% last year to 63.3% this year. The percent of academic leaders rating the learning outcomes in online education as the same or superior to those in face-to-face instruction is now at 71.4%. Only 29.1% of academic leaders report that their faculty accepts the “value and legitimacy of online education.” Among schools with the largest distance enrollments, 60.1% report faculty acceptance while only 11.6% of the schools with no distance enrollments do so. This figure is up from 3.94 million in fall 2007 and 5.6 million in fall 2009 (Allen & Seaman, 2015). Research by Tanner et al. (2009) point out that student and faculty comfort with online learning is impacted by their attitude and perceptions of online learning. Faculty acceptance is key to success of online programs, so understanding these attitudes and perceptions is critical if online education is to proliferate (Tabata & Johnsrud 2008).

2.3. Student Perspectives of Online Learning

Similar to all learning modalities, online education has its unique advantages and disadvantages which are experienced differently by all stakeholders – including providers and recipients of the education. As the online education scales up, it is essential to consider the perspective of the primary stakeholders in the conversation. Smart and Cappel (2006) noted that understanding student perceptions helps instructors and course designers on how best to foster active participation and engagement in the learning process, which effectively enhances students' learning and motivation. Young and Norgard (2006) concluded that “in order to assure quality and student satisfaction, academic institutions and their faculty must pay close attention to their students' perceptions of online courses and programs” (p.113).

As progress continues within a sea of unknowns, it is essential to clarify perceptions, fundamental assumptions regarding perceptions, link this to outcomes to assess effectiveness of online learning implementation. A student's attitudes and perceptions toward learning impacts how effective is the instruction whether delivered face to face, or online (Tanner et al., 2009). Sahin and Shelly (2008) stated that student needs and perceptions are utmost important and should be considered in designing, developing, and delivering online courses. It is important for researchers to understand the characteristics of students participating in online learning and how these characteristics may influence the learning outcomes that are achieved.

Many studies have concluded that there are several advantages and disadvantages of online education. In a study of 76 graduate students, Song, Singleton, Hill, and Koh (2004) identified both flexibility and convenience as primary strengths of online learning. Specifically, they found that course design, learner motivation, time management, and familiarity with technology lead to success in an online course while technical problems, time constraints, difficulty in understanding instructional goals, and a lack of community are the barriers to learning online.

Impact of Online Learning on Traditionally Marginalized Student Groups

The data is not as clear with respect to the impact of race on online learning. Merrill (2010) reported that in university settings, African-American students preferred the traditional classroom setting to facilitate face-to-face communication to easily access instructors. Many students preferred collaborative learning in groups, which may be facilitated most efficiently in a traditional classroom setting. Nance (2007) demonstrated that the presence of negative experience with racial discrimination, students may be motivated to select online courses over face-to-face options. Okwumabua et al., (2012) found that African-American students report/display negative attitudes toward online learning, with the majority claiming that they do not enjoy using computers for school related work. Additionally, 67% were not confident in the use of computers and reported low levels of confidence working in an online environment. Ashong and Commander (2012) examined African-American student's perceptions of online learning as compared to their White-American counterparts taking into account nine different variables of online learning. Their study reported that both African-American and White students had overall positive views of online learning, but African-Americans reported significantly less positive views regarding the feature of synchronicity. In addition, the results indicate that gender and ethnicity independently influence student's perceptions of online learning. Cost has often been cited as a primary reason for African-American's initial reluctance to accept and fully utilize computer-mediated communication and e-learning, and compared to Caucasians, fewer African-Americans had home access to computers and Internet service in their homes; while African Americans have equal access to computer and Internet technology in public settings, investment in capital costs for home use has often been cost-prohibitive and the technology has been cost-restrictive in one's home.

3. Study Objectives

Given the slow uptake of HBCU in adopting online curriculum and the dearth of literature focused on experiences and outcomes of ethnic and minority students with online learning, this study focused on African American undergraduate students. It is important for researchers to understand the characteristics of students who participate in online education and how these characteristics may influence the learning outcomes that are achieved. Identifying these students' perceptions and experiences could help instructors to develop effective online teaching and learning strategies specifically structuring their online course offerings. Furthermore, the findings should be incorporated into the design of online learning systems so that students, educators and institutions can take advantage of a variety of advanced communications and instructional technologies thereby maximizing overall learning effectiveness.

This study sought to explore the perceptions, and experience of African-American undergraduate college students toward online education from a public university located in the Southeastern United States.

Specifically, this study sought to explore the following research questions:

1. What is the general impression of African-American college students toward online education?
2. Is there a significant difference in perceptions of online education when African-American freshman college students are compared with African-American upperclassmen (i.e., juniors and seniors) college students?
3. Is there a significant difference in perceptions of online education when African-American business students are compared with African-American no business college students?

It is hypothesized that African-American college students generally have positive perceptions of online education. In addition, it is hypothesized that there would be significant differences in African-American business students' perceptions of online education when compared to African-American non-business students. Also, it is expected that there would be significant difference between African-American freshmen students and African-American senior college students' perceptions of online education.

4. Methods

4.1. Study Design

The objective of this study was to determine the perceptions of African-American college students toward online education at a historically black college (HBCU) on the East coast. The AACSB-accredited institution at which the study was conducted serves more than 6,000 undergraduate students. Online courses are offered and taught in several departments including School of Business. Blackboard Learning Management Information System (LMIS) is the primary platform used for online instruction at this institution.

Online courses are only taught by faculty who have received appropriate training and are certified online instructors. In the fall 2016 semester, 50 plus courses were taught online in various departments throughout the university.

4.2. Study Population

Table 1 shows the demographic profile of the study population. It consisted of 175 African-American undergraduate students at an HBCU on the East coast who were enrolled in the School of Business during the fall2016 semester. This was a convenience sample consisting of students taking both face-to-face courses and online courses and they were invited to participate in the study. Recruitment took place in the classes of business faculty who were teaching both online and face-to-face courses, so as to limit any influence on student perceptions. Participation of students was voluntary and participants received no monetary or grade compensation.

Table 1: Demographic Profile of Study Population

Demographic Variables		Percent of Respondents (n=175)
Gender	Male	48.6%
	Female	51.4%
Age	19 or below	38.2%
	20-22	30.2%
	23-25	10.3%
	25 or above	21.3%
Enrollment Status	Part-Time	10.9%
	Full-Time	89.1%
Student Classification	Freshman	37.1%
	Sophomore	10.3%
	Junior	20.0%
	Senior	32.6%
Overall Academic Performance	GPA (mean)	3.01
Major	College of Business	69.8%
	Non-College of Business	30.2%

4.3. Survey Development

A survey questionnaire was generated from previous studies conducted by other researchers (Artno & Stephens, 2006; Osborne et. al., 2009, & Tanner et al., 2006). The survey was pilot-tested on a sample of students (n=10) after which necessary modifications were made to fine tune the survey instrument. The questionnaire was divided into three different sections. The 1st section included 17 perceptual questions pertaining to online education, the 2nd section were related to the effectiveness online tools, and finally, the 3rd section captured demographic information including experience with online courses.

5. Results and Discussion

The study population consisted of 175 African American undergraduate students at an HBCU on the East coast who were enrolled in the School of Business during the 2016 semester. The study population was distributed by gender (49 percent males and 51 percent females), with a mean age of 24, 89percent were enrolled full-time, and 47 percent identified themselves as underclassman (freshman or sophomores). Among the 53 percent of students who identified themselves as upperclassmen (juniors or seniors), 69 percent reported having previously taken at least one online course. Finally, 70 percent of all respondents were business majors, and 30 percent were non-business majors. The first set of research questions dealt with perceptions of African-American students' perceptions about online education and if those perceptions differed between various groups such as business and non-business, and freshmen and upperclassmen.

Using an independent sample t test, descriptive statistics were calculated based on the responses from the student groups and the results of the t tests are presented in tables 2, 3 and 4.

Table 2: General Perception of African-American Students toward Online Education

	Mean	t test H ₀ : μ=3 H ₁ : μ≠3 (P Value)
1. Online courses are easier than face-to-face courses.	2.89	0.187
2. Students learn more in online classes than in face-to-face classes.	3.30	0.001**
3. Students are more willing to “speak” their mind in an online class than in face-to-face class.	3.01	0.896
4. Online courses require more time for students to complete successfully than face-to-face courses.	3.38	0.000**
5. Face-to-face courses provide better opportunities for students to interact than online classes.	3.82	0.000**
6. Students and faculty interactions are more effective in face-to-face classes than in online classes.	3.87	0.000**
7. More communications & technical problems occur in online classes than face-to-face classes.	3.46	0.000**
8. More students withdraw from online classes than face-to-face classes.	2.89	0.141
9. Students who procrastinate should not take an online class.	3.86	0.000**
10. Students who are computer illiterate should not enroll in online classes.	3.87	0.000**
11. Integrity issues are paramount in online education.	3.45	0.000**
12. Quality issues are paramount in online education.	3.27	0.000**
13. Students spend more time completing their assignments such as quizzes, tests and home works in online classes than in face-to-face classes.	3.31	0.000**
14. Quantitative courses such as mathematics & statistics cannot be taught effectively through online classes.	3.39	0.000**
15. Quiz & test questions asked in online classes are more difficult than face-to-face classes.	2.95	0.500
16. I am satisfied with my online classes.	3.53	0.000**
17. More courses should be offered online in future to help students to earn their degree faster.	3.66	0.000**
** Significant at 0.1% level of significance Mean is calculated on the basis of a 5-point scale of 1 = "Strongly Disagree" and 5 = "Strongly Agree"		

Table 3: Comparison of African-American Freshman and Upperclassmen toward Online Education

	Freshman Students (mean)	Upper-class students (mean)	t test H ₀ : μ ₁ =μ ₂ H ₁ : μ ₁ ≠μ ₂ (P-value)
1. Online courses are easier than face-to-face courses.	2.38	3.12	0.001**
2. Students learn more in online classes than in face-to-face classes.	2.54	3.18	0.001**
3. Students are less willing to “speak” their mind in an online class than in face-to-face class.	2.85	3.08	0.226
4. Online courses require more time for students to complete successfully than face-to-face courses.	3.40	3.37	0.870
5. Face-to-face courses provide better opportunities for students to interact than online classes.	4.10	3.68	0.007**
6. Students and faculty interactions are more effective in face-to-face classes than in online classes.	4.45	3.60	0.034*
7. More communication & technical problems occur in online classes than face-to-face classes	3.70	3.35	0.030*
8. More students withdraw from online classes than face-to-face classes	3.07	2.80	0.101
9. Students who procrastinate should not take an online class	3.74	3.90	0.367
10. Students who are computer illiterate should not enroll in online classes.	3.73	3.96	0.200
11. Integrity issues are paramount in online education	3.27	3.53	0.098
12. Quality issues are paramount in online education.	3.23	3.29	0.731
13. Students spend more time to complete tests, quizzes, and homework assignments in online classes compared to face-to-face classes.	3.09	3.40	0.074
14. Quantitative courses such as mathematics & statistics cannot be taught effectively through online classes.	3.69	3.25	0.017*
15. Quiz & test questions asked in online classes are more difficult than face-to-face classes.	3.16	2.85	0.055
16. I am satisfied with my online classes.	3.50	3.54	0.864
17. More courses should be offered online in future to help students to earn their degree faster.	3.65	3.68	0.982
** Significant at 1% level of significance * Significant at 5% level of significance Mean is calculated on the basis of a 5-point scale of 1 = "Strongly Disagree" and 5 = "Strongly Agree".			

Table 4: Comparison of African-American Business Students and Non-Business Students Perceptions of Online Education at an HBCU

	Non-Business Students (mean)	Business students (mean)	t test H ₀ : $\mu_1 = \mu_2$ H ₁ : $\mu_1 \neq \mu_2$ (P-value)
1. Online courses are easier than face-to-face courses.	2.83	2.91	0.864
2. Students learn more in online classes than in face-to-face classes.	2.67	2.77	0.578
3. Students are less willing to "speak" their mind in an online class than in face-to-face class.	3.26	2.90	0.046**
4. Online courses require more time for students to complete successfully than face-to-face courses.	3.35	3.39	0.845
5. Face-to-face courses provide better opportunities for students to interact than online classes.	4.05	3.71	0.028**
6. Students and faculty interactions are more effective in face-to-face classes than in online classes.	3.64	3.97	0.256
7. More communications & technical problems occur in online classes than face-to-face classes.	3.28	3.54	0.136
8. More students withdraw from online classes than face-to-face classes.	2.90	2.87	0.871
9. Students who procrastinate should not take an online class.	3.71	3.92	0.283
10. Students who are computer illiterate should not enroll in online classes.	3.73	3.96	0.200
11. Integrity issues are paramount in online education.	3.39	3.50	0.305
12. Quality issues are paramount in online education.	3.18	3.31	0.439
13. Students spend more time completing their assignments such as quizzes, tests and home works in online classes than in face-to-face classes.	3.35	3.28	0.681
14. Quantitative courses such as mathematics & statistics cannot be taught effectively through online classes.	3.62	3.28	0.056
15. Quiz & test questions asked in online classes are more difficult than face-to-face classes.	2.86	2.98	0.512
16. I am satisfied with my online classes.	3.50	3.54	0.864
17. More courses should be offered online in future to help students to earn their degree faster.	3.65	3.68	0.982
** Significant at 5% level of significance Mean is calculated on the basis of a 5-point scale of 1 = "Strongly Disagree" and 5 = "Strongly Agree".			

5.1. The Perception of African-American College Students at This HBCU toward Online Education Is Generally Positive.

Overall, these African-American undergraduate college students are positive about their perceptions toward online education at this HBCU (Table2). They think, however, (1) face-to-face courses provide better opportunities for students to interact than online classes, (2) students and faculty interactions are more effective in face-to-face classes than in online classes, and (3) online education has integrity, quality and technical issues.

5.2. Underclassmen Were More Likely to Have Negative Perceptions of Online Education

Underclassmen and upperclassmen had some significantly different perspectives toward online education. Compared to upperclassmen, underclassmen were more likely to report that online courses are more difficult and that they learned less from the online platform. Underclassmen were more likely than upperclassman to cite communication and technical challenges as barriers in the online platform. All students especially the underclassmen considered face-to-face learning a more ideal platform for interaction. Table 3 compares the perspectives of underclassmen and upperclassmen with respect to online learning.

5.3. Non-Business Majors Were More Likely to Base Perceptions on Communication Factors.

As demonstrated in Table 4, business majors and non-business majors had significantly different perceptions regarding the ease of communication and collaboration when using an online platform. Non-business majors reported that they were more likely to speak through an online platform and felt face-to-face courses provided very good opportunities to interact with their peers. It is important to remember that the surveys were administered in a business class. It is expected that students who are novice to the subject would be more hesitant to assert themselves via a "permanent" written record. Face-to-face classes provide the opportunity for non-business majors to clarify their concepts on the textbook didactics through in-class discussions and conversations with peers. Because business majors already have a foundation in the subject matter, students are less likely to depend on face-to-face communication with classmates to clarify concepts, and are more likely to be neutral to communicating on online learning forums. With an increasing number of students enrolling in online classes in recent years at all levels of HBCUs, it becomes paramount to understand the characteristics and perspectives of online students toward online education.

A number of studies have described the positive correlation between experience and perceptions toward technology; the greater the amount of experience the users have with technology the higher the level of users' satisfaction in accepting and using the new technology (Martins & Kellermanns, 2004; Simmers & Anandarajan, 2001; and Stoel, L. & Lee, K. H., 2003). Among African-American students, studies have shown that students with exposure to distance education and/or online courses are more likely to prefer online learning than traditional learning (Arbaugh, 2004). This study provided a preliminary look at the perceptions of students toward online education in an HBCU. This results revealed that freshmen and upperclassmen (i.e., juniors and seniors) students perceptions toward online learning differ significantly in some aspects. Majority of freshmen perceived that online courses were more difficult and that they would learn less from the online platform. Therefore, more exposure, information and training are needed to make sure these young African-American students (i.e., freshmen) are technically ready to take online classes.

6. Conclusion

This study found that African-American students in general have positive feelings/perceptions about online education. Perceptions are a product of experience and opinion. The results of this study suggests that students especially African-American freshman who had no prior exposure as well as experience with online education technology differ significantly from those students who had experience with online education in some aspects of online education. The results have important implications for online educators/instructors and HBCUs. Since there is a gap between freshman students and upper class African-American students with regard to their perceptions of online education, the HBCUs must come up with a practical strategy to bridge this gap. Specifically, HBCUs should provide adequate support and require their freshmen to participate in online learning training dealing with not only the related information technology but also academic self-regulation in order to help them to be well prepared for online education.

References

- Allen, I. E., & Seaman, J. (2015) Tracking Online Education in the United states, Babson Research Group and Sloan consortium, <http://onlinelearningconsortium.org/read/online-report-card-tracking-online-education-united-states-2015/>.
- Arbaugh, J. B. (2004). Learning to learn online: A study of perceptual changes between multiple online course experiences, *Internet and Higher Education*, 7, pp. 169-182.
- Artino, A. R., & Stephens, J. M. (2007). Motivation and self-regulation in online courses: A comparative analysis of undergraduate and graduate students. In *annual meeting of the Association for Educational Communications and Technology, Anaheim, CA*.
- Ashong, C. Y., & Commander, N. E. (2012). Ethnicity, gender, and perceptions of online learning in higher education. *Journal of Online Learning and Teaching*, 8(2), 98.
- Boyette, M. A. (2008). An investigation of the online learning environment in higher education through the observations and perceptions of students of color (Doctoral dissertation), retrieved from: <http://scholarcommons.usf.edu/>.
- Kim, J. Kwon, Y. and Cho. D. (2011). Investigating factors that influence social presence and learning outcomes in distance high education. *Computers & Education*, 7(2), 1512-1520.
- Lease, A. & Brown, T. A. (2009). Distance Learning: Past, Present and Future, *International Journal of Instructional Media*, 36(4), 415-426.
- Merills, J.M. S. (2010). Factors affecting nontraditional African-American students' participation in online literature classes (Doctoral dissertation), Retrieved from <http://libres.uncg.edu>.
- Martins, L. L. & Kellermanns, F. W. (2004). A model for business school students' acceptance of a web-based course management system, *Academy of Management Learning & Education*, 3(1), 7-39.
- Nance, M. (2007). Online degrees increasingly gaining acceptance among employers. *Diverse Issues in Higher Education*, 24(4), 50.
- Okwumabua, T. M., Walker, K. M., Hu, X., & Watson, A. (2011). An exploration of African American students' attitudes toward online learning. *Urban Education*, 46(2), 241-250.
- Osborne, R. E., Kriese, P., Tobey, H., & Johnson, E. (2009), "Never the Two Shall Meet? Student vs. Faculty Perceptions of Online Curses," *Journal of Educational Computing research* 40(2): 171-182.

- Rovai, A. P., & Gallien Jr, L. B. (2005). Learning and sense of community: A comparative analysis of African American and Caucasian online graduate students. *The Journal of Negro Education*, 53-62.
- Sahin, I., & Shelley, M. C. (2008). Considering Students' Perceptions: The Distance Education Student Satisfaction Model. *Educational Technology & Society*, 11(3), 216-223.
- Simmers, C. A. & Anandarajan, M. (2001). User satisfaction in the Internet-anchored workplace: An exploratory study, *Journal of Information Technology, Theory and Application*, 3(5), 39-62.
- Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education*, 5(1), 201-219.
- Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The internet and higher education*, 7(1), 59-70.
- Stoel, L. & Lee, K. H. (2003). Modeling the effect of experience of student acceptance of Web-based courseware, *Internet Research*, 13(5), 364-374.
- Tabata, L. & Johnsrud, L. (2008). The impact of faculty attitudes toward technology, Distance Education, & Innovation, *Research in High Education* 49(7), 625-646.
- Tanner, J. R., Noser, T. C., & Totaro, M. W. (2009). Business faculty and undergraduate students' perceptions of online learning: A comparative study. *Journal of Information Systems Education*, 20(1), 29.
- Young, A., and Norgard, C. (2006). Assessing the quality of online courses from the students' perspective. *The Internet and Higher Education*, 9(2), pp107-115.